

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application.

COMPLETE LISTING OF CLAIMS:

Claims 1-16 : (Canceled)

Claim 17 : (New) A reader interfacing device, comprising: a communication path between a reader configured to emit and receive interrogating radiation at a first radiation frequency, and a remote tag or smart label configured to be interrogated using radiation of a second frequency different from the first frequency by at least an order of magnitude, the reader being operable to communicate through the device to the remote tag or smart label.

Claim 18 : (New) The device according to claim 17, including power conversion means for converting the interrogating radiation received at the device from the reader to generate power supply potentials for powering the device.

Claim 19 : (New) The device according to claim 17, wherein the device is mutually magnetically coupled to the reader for receiving the interrogating radiation therefrom and for providing a modulated load thereto for communicating back to the reader.

Claim 20 : (New) The device according to claim 19, wherein the device includes a first loop antenna for magnetically coupling to a corresponding second loop antenna of the reader.

Claim 21 : (New) The device according to claim 20, wherein the device incorporates a modulated field effect transistor connected to the first loop antenna for providing a variable load detectable at the reader.

Claim 22 : (New) The device according to claim 17, wherein the second frequency is in a range of 300 MHz to 90 GHz.

Claim 23 : (New) The device according to claim 22, wherein the device is configured to emit radiation to the remote tag or smart label and receive radiation therefrom using patch antennas.

Claim 24 : (New) The device according to claim 22, wherein the second frequency is substantially in a range of 2 GHz to 3 GHz.

Claim 25 : (New) The device according to claim 17, including translating means for converting between a modulation format used by the reader for modulating information onto the interrogating radiation to be received by the device and a modulation format used by the remote tag or smart label for communicating therefrom to and from the device.

Claim 26 : (New) The device according to claim 25, wherein the translating means includes an amplitude demodulator for demodulating a first received signal generated in the device in response to receiving thereat the interrogating radiation from the reader and thereby generating a first demodulated signal, the translating means further including a modulator supplied with a carrier signal at the second frequency and operable to modulate the carrier signal with the first demodulated signal to generate radiation for interrogating the remote tag or smart label.

Claim 27 : (New) The device according to claim 26, wherein the translating means includes a demodulator for heterodyne mixing a second received signal generated in response to receiving radiation from the remote tag or smart label with the carrier signal to generate a second demodulated signal for use in providing load modulation detectable at the reader.

Claim 28 : (New) The device according to claim 27, wherein the carrier signal is generated by a microwave oscillator frequency locked to the first frequency.

Claim 29 : (New) The device according to claim 17, wherein the reader includes optical interfacing means for providing the communication path between the reader and the device.

Claim 30 : (New) The device according to claim 29, wherein the interfacing means includes a laser scanner and a liquid crystal display, the scanner being operable to scan information presented on the display to provide information exchange between the reader and the device.

Claim 31 : (New) The device according to claim 17, including optical interfacing means for providing the communication path between the device and the remote tag or smart label.

Claim 32 : (New) A remote tag or smart label for use with a reader interfacing device comprising: a reader configured to emit and receive interrogating radiation at a first radiation frequency, the remote tag or smart label being configured to be interrogated using radiation of a second frequency different from the first frequency by at least an order of magnitude, the reader being operable to communicate through the device to the remote tag or smart label, the remote tag or smart label incorporating amplifying means for reflectively amplifying a received signal generated therein in response to receiving the interrogating radiation from the device, the amplified received signal being useable for providing response radiation receivable at the device.